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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,075	01/03/2007	Klaus Wolter	554.002.002	8462

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EXAMINER	
RICHEY, SCOTT M	

ART UNIT	PAPER NUMBER
2877	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/566,075	WOLTER, KLAUS	
	Examiner	Art Unit	
	Scott M. Richey	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 January 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification / Drawings

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The examiner objects to the specification and the drawings for failing to comply with the first paragraph of 35 U.S.C. 112. Pages 7 and 8 of the specification describe the embodiment of Figure 1. The specification states:

> If the device 1 moves at a speed $v = \Delta l/\Delta t$ in the direction looking from the emission location towards the measurement location, then a phase displacement is added for both paths 11, 12 due to this movement. In this situation, 11, 12, and Δt the time which the device 1 requires for the distance Δl. The run time increases due to the ***Sagnac effect*** on path 12 by Δt and on path 11 by $a*\Delta t$. At the exit of the path 11, therefore, a phase angle is present which corresponds to the phase angle of a path at rest with the run time of $t_1 + a*\Delta t$, whilst at the exit of the path 12 a phase angle is present which corresponds to the phase angle of a path at rest with the run time of $t_2 + \Delta t$. The change in the phase displacement between the emission parts on the two paths 11, 12 as a dependency of the speed v by (a-l) $*\Delta t$ gives a periodic interference signal. [Emphasis added.]

The Sagnac effect is not a phenomenon of linear displacements, but rather rotational displacements, and it is measured by utilization of a closed-loop geometry. What the applicant is describing in this paragraph appears to be unrelated to the Sagnac effect. Element 14 is disclosed as a device for measuring rotation, described exemplarily as a laser gyroscope. While not traditional, the schematic representation of Figure 1 with a few minor alterations could potentially have been used to describe a

Sagnac geometry for measuring rotation. Element 14, however, appears from the last paragraph of page 8 to be used for removing any rotational effects, i.e. Sagnac effects, from the rest of Figure 1.

The paragraph, inter alia, spanning pages 7 and 8 does not comport with known physical laws. The configuration, as set forth in the paragraph, will not give a periodic interference signal based upon linear translations. The speed of light is a constant as it moves across the two homogeneous media (11 and 12), which are traveling in the same direction. Even in inhomogeneous media, the phase difference is fixed by the media and not linear translations.

Consider a single photon for simplicity. As the photon is split between paths 11 and 12, the phase difference between the two paths is unaffected by linear translations. Similarly to this embodiment, embodiments two, three, and four are physically incapable of providing the listed functions as set forth in the specification, i.e. the four embodiments are physically incapable of measuring linear speed as set forth in the specification and drawings.

Page 13 and Figure 5 each describe what appears to the "the system" found in the claims. The system is disclosed as a cube with six devices, one for each face of the cube. The devices each measure "translatory and rotational speeds." Device-pairs, i.e. devices grouped by opposite sides of the cube, measure speed along parallel axes. Speed is a scalar, not a vector. Therefore, neither the reason nor the function of devices on opposite faces can be determined. Put another way, each device is capable of measuring speed in only three spatial directions. All real world, i.e. real space,

directions are degenerate to three mutually orthogonal directional vectors. There is no fourth, fifth, or sixth dimension. Therefore, the specification's and the claims' reliance on the fourth, fifth, and sixth device for completely describing the speed of the system is nonsensical.

Page 13 invokes "Fizeau" in addition to Sagnac. A Fizeau interferometer (presumably the invoked by the language "according to Fizeau") is capable of measuring relative speed between a fully-reflecting object and a partially reflecting mirror. Alternatively, "Fizeau" might be a reference to the so-called "Fizeau experiment," where the scientist, Fizeau, measured the phase difference in counter-propagating path inside flowing water. The water, however, flowed only along one direction of the counter-propagating beam path. Neither of the possible explanations for the invocation of "Fizeau" have any relevant relation to the applicant's disclosure.

Page 13 invokes "Doppler" in addition to Sagnac and Fizeau. The applicant's disclosure is directed to self-contained devices for measuring linear speed. It is well known that light does not travel in a luminiferous aether. Indeed, it is well accepted in physics that the so-called luminiferous aether does not exist. Therefore, this invocation of "Doppler" is inconsistent with modern physics and appears to have no relevant relation to the applicant's disclosure.

Page 17 of the specification states:

> The method and/or the device presented here for the measurement of speed vectors detects, for the case of a three-dimensional measurement, **all speeds/speed vectors, in total, e.g. starting from the speed of the Milky Way in the universe known to us, via the movement of the Solar System with regard to the galactic centre, via the movement of the Earth in the**

> **Solar System, via the inherent movement of the Earth itself**, such as the movement of the Earth's crust, through to the inherent or natural movement of the object which is to be measured, like the inherent or natural speed of the device itself. For the determination of the vectorial portion being considered accordingly, the others are therefore to be subtracted. [Emphasis added.]

Albert Einstein's theories of relativity are well accepted theories of physics. Measurements of *inherent* speeds as described in the specification are not consistent with modern and accepted laws of physics. Linear speeds cannot be measured by the methods described in the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-18 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The claimed invention attempts to measure linear translations of self-contained devices based on the theory that the luminiferous aether exists. See the objection above for more complete reasoning why the aether is required for the applicant's device to function. Since shortly after the famous experiments of Michelson and Morley, and many times since, the theory that light propagates through the so-called aether has been dispelled.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The claims set forth devices, "arranged in the system for the measurement of a ***speed*** and of a ***rotation***." Emphasis added. The claims further limit the devices as some sort of non-common-path phase-measuring instruments. The disclosure fails to describe such devices capable of providing the claimed function of measuring speed. While the disclosure describes devices for this purpose, the devices as set forth are incapable of providing the described function.

Due to the apparent lack of enablement, the examiner requests **proof of reduction to practice**. Also due to the apparent inoperability of the claimed invention, the examiner cannot in good faith apply art at this time.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 sets forth at least six devices, "arranged in the system for the measurement of ***a speed*** and of ***a rotation***." The claim later describes the devices as each measuring a different speed. As set forth, the claim is indefinite because one of

ordinary skill cannot determine whether the first instance of the speed is measured by all the devices or whether the first instance of the speed should be construed as measuring at least six different speeds.

Claim 1 contains two instances of the limitation "a speed." Whether each instance is a new speed or whether they are each the same speed cannot be determined. "[T]he speed," as found later in the claim, is not sufficiently defined as being associated with one or both of the antecedent terms. "[T]he device" lacks sufficient antecedent basis.

Further, claim 1 is indefinite because the claim first sets forth several devices for measuring a speed, and then later describes the devises themselves as having speeds. It is unclear whether the devices are measuring a single speed (w.r.t. the devices) of an unclaimed object or whether the devices are undergoing displacements with respect to an unclaimed object or with respect to each other.

Claim 10 recites the limitation "the respective device," but the claim lacks sufficient antecedent basis for this limitation.

Claim 10 recites "at least one part," but later requires "the emission parts." There is insufficient antecedent basis for "the emission parts." Further, the emission *parts* implies more than one emission part, which is inconsistent with "at least *one*."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Richey whose telephone number is (571) 270-

1296. The examiner can normally be reached on Monday - Thursday, 10:00 - 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on (571) 272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Scott M. Richey
Patent Examiner, Art Unit 2877

/Gregory J. Toatley, Jr./
Supervisory Patent Examiner, Art Unit 2877

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